

Appln. No.: 10/511,817
Amendment Dated June 21, 2006
Reply to Office Action of March 21, 2006

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Remarks/Arguments:

Claims 11-25 are currently pending in the application. Claims 1-10 were previously cancelled.

In the Office Action dated March 21, 2006, a set of guidelines were suggested for the applicant's use in the Specification. Claims 13-25 were rejected under 35 U.S.C. § 112 for allegedly being indefinite. Claims 11, 12 and 23-25 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,679,475 ("Rembold et al."). Claims 13-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rembold et al. in view of U.S. Patent No. 4,712,767 ("Losser et al."). Claims 21 and 22 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Rembold et al. in view of Losser et al. and further in view of U.S. Patent No. 6,994,406 ("Krawczyk et al.").

The Office Action dated March 21, 2006 and references cited therein have been carefully considered. In view of the foregoing amendments and the following remarks, Applicants respectfully traverse the rejections set forth in the Office Action.

Specification

Applicants have considered the guidelines suggested for use in Applicant's specification. While no specific objection has been set forth in the Office Action with regard to the specification, Applicants are submitting a substitute Specification which is more consistent with the proffered guidelines.

Claim Rejections - 35 U.S.C. § 112

With regard to claims 13-22, Applicants have amended claims 13 and 14 to remove the narrow phrase "in particular a triangular profile". Claims 15-22, which are dependent directly or indirectly on claims 13 and 14, do not recite the phrase. Therefore, any perceived indefiniteness arising from the phrase "in particular a triangular profile" is believed to be addressed. For consistency, similar language beginning with "in particular" was removed from claim 11. Claim 11 was also amended to correct a minor informality.

With regard to claim 23, applicants respectfully submit that no method step is present. Claim 23 recites additional attributes of the structure of claim 11, and in particular the force of the spring. Therefore, applicants respectfully request reconsideration of the rejection of claim 23 under 35 U.S.C. § 112.

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Applicants have amended claim 24 to more positively recite structural features of the claimed solenoid valve. In particular, claim 24 was amended to more positively recite "an operational clearance adjacent the magnet armature, said clearance being provided by the preloading force of the spring." Support for this amendment is provided in sections of the specification and in claim 24 as previously presented. Therefore, no new matter has been added.

Applicants have elected to cancel claim 25 in favor of a submitting new claim 26, which is directed to a method of adjusting a preloading force of a spring in a solenoid valve.

Claim Rejections - 35 U.S.C. § 102

To establish anticipation of a claim, the Office Action must show that each and every element recited in the claim is disclosed or inherent in the cited prior art reference. Applicants respectfully submit that the Office Action fails to meet this burden of proof with regard to Rembold, et al.

In rejecting claim 11 under Rembold et al, the Office Action misstates the elements recited in claim 11. For example, claim 11 recites "the spring is supported with one end on the magnet core, wherein the other end of the spring abuts on an area of the valve tappet remote from the valve seat." The Office Action, in contrast, loosely refers to this element as a spring "interacting between the core and the tappet." This is not a proper analysis of claim 11.

Turning to the merits, Rembold et al. does not disclose a spring supported with one end on the magnet core, and the other end abutting a valve tappet. Instead, Rembold et al. teaches a spring (86) having a first end braced on an adjusting screw (90), as opposed to the magnet core (74), and a second end braced on a head (84) as opposed to the tappet (66). Therefore, neither end of the spring (86) in Rembold et al. is arranged in the manner recited in claim 11. In fact, spring (86) is inserted in a bore drilled into the magnetic core to accommodate the spring (86), adjusting screw (90) and head (84). This is a far more complicated arrangement with differences that clearly differ from that express language of claim 11. Therefore, applicants respectfully submit that claim 11 is not anticipated by Rembold, et al.

Claims 12 and 23-25 are dependent directly or indirectly on claim 11, and incorporate all the elements recited in claim 11. Therefore, claims 12 and 23-25 are not anticipated by Rembold et al. for at least the same reasons that claim 11 is not anticipated.

Claim Rejections - 35 U.S.C. § 103(a)

Claims 13-20 are dependent directly or indirectly on claim 11, and incorporate all the elements recited in claim 11, including a spring "supported with one end on the magnet core,

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wherein the other end of the spring abuts on an area of the valve tappet remote from the valve seat." As noted above, Rembold et al. does not disclose a spring arranged in this manner. Moreover, Losser et al. fails to disclose a spring arranged in the manner recited in claim 11. Instead, the spring means 24 in Losser et al. is connected on one end to a ball carrier (20) and on another end to an unidentified element at the inlet opening (12). Therefore, the deficiency of Rembold et al. is not overcome by combining Rembold et al. with Losser et al. Accordingly, claims 13-20 are not rendered obvious in view of the combination of Rembold et al. and Losser et al.

Claims 21 and 22 are also dependent indirectly on claim 11, and incorporate all the elements recited in claim 11, including a spring "supported with one end on the magnet core, wherein the other end of the spring abuts on an area of the valve tappet remote from the valve seat." As noted above, neither Rembold et al. nor Losser et al., alone or in combination, teach or suggest the elements recited in claim 11. The deficiencies of Rembold et al. and Losser et al. are not overcome by combining the references further with Krawczyk et al., as Krawczyk et al. also fails to disclose a spring "supported with one end on the magnet core, wherein the other end of the spring abuts on an area of the valve tappet remote from the valve seat." The valve embodiments of Krawczyk et al. show springs in several configurations, none of which feature a spring end supported on a magnet core and another spring end abutting a valve tappet. Therefore, claims 21 and 22 are not rendered obvious in view of the combination of Rembold et al. and Losser et al., as further modified by Krawczyk et al.

New Claims

Applicants have added new claim 26 which is directed to a method of adjusting a preloading force of a spring in a solenoid valve, the method comprising the steps of interconnecting a valve tappet, a magnet armature and a compression spring to form a subassembly to be incorporated into the solenoid valve, connecting a device onto the subassembly with a bottom portion of the device seated on an end of the magnet armature, the device having a stepped bore into which an end of the compression spring projects, guiding a weight in the stepped bore under the influence of gravity until a bottom surface of the weight contacts the end of the compression spring that projects in the stepped bore, and applying a displacing force to the valve tappet to displace the valve tappet relative to the armature, the displacing force being selected to displace the weight by a predetermined stroke distance corresponding to an operational clearance to be maintained after the subassembly is incorporated into a solenoid valve. Support for new claim 26 is found in sections of the

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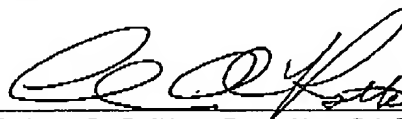
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specification and drawings, including but not limited to paragraphs [0017]-[0019] of the substitute specification filed October 19, 2004, and Fig. 2. No new matter has been added.

Conclusion

In view of the foregoing amendments, remarks and new claim, Applicants believe the application is in condition for allowance, such action being respectfully requested at this time. If the Examiner believes there are any outstanding issues preventing allowance of the application, the Examiner is encouraged to contact the undersigned attorney at (610) 407-0700.

Respectfully submitted,



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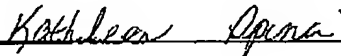
Dated: June 21, 2006

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Enclosure: Substitute Specification

The Director is hereby authorized to charge or credit Deposit Account No. 18-0350 for any additional fees, or any underpayment or credit for overpayment in connection herewith.

I hereby certify that this correspondence is being Facsimile Transmitted to 571-273-8300, Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on: June 21, 2006



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